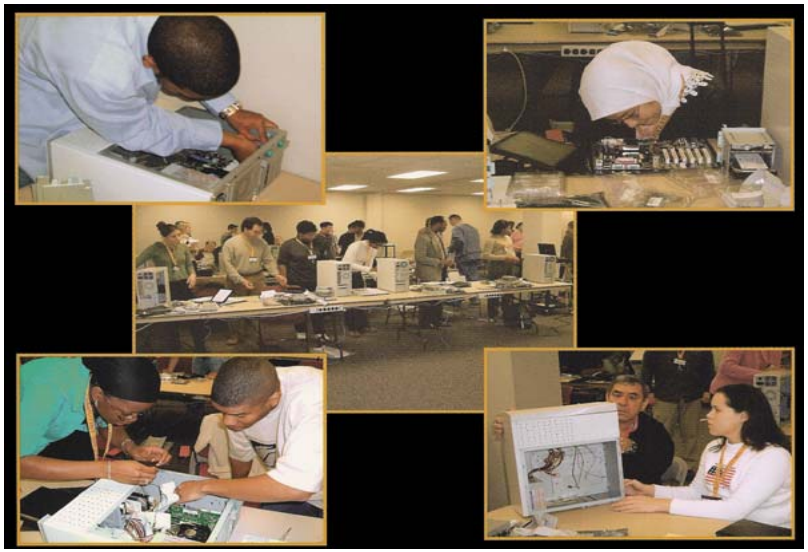
Computational Science Workshop for Underrepresented Groups

- **Annual series of workshops for undergraduate students & their faculty mentors from underrepresented groups**
- **Workshops provide participants with hands-on experience in parallel computing, including the assembly of a Linux cluster from components**
- **The parallel cluster is used for algorithmic & simulation exercises in a tutorial setting**
- **Participants also visit various research laboratories & attend lectures on emerging trends in bio-info-nano sciences**

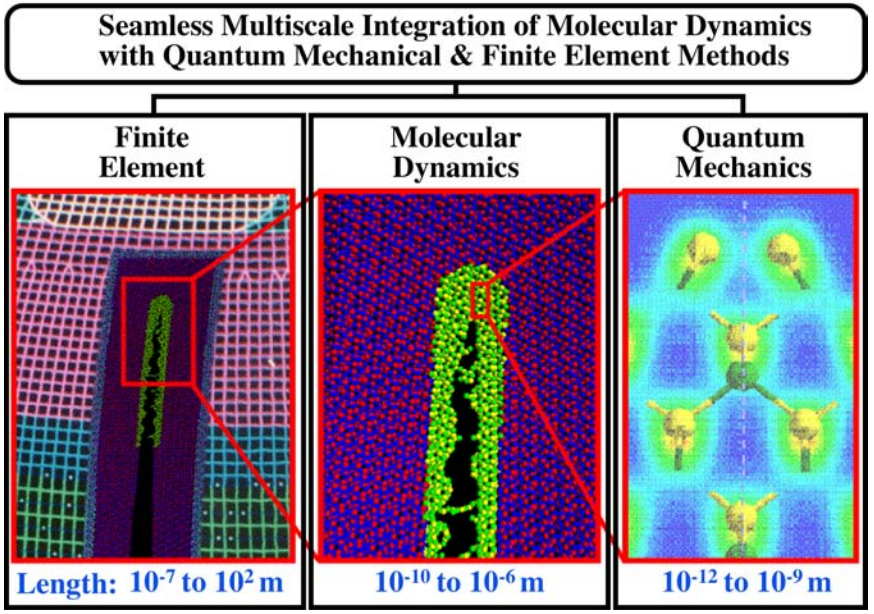


"I am one of the students who recently attended your workshop, and I was just writing to sincerely thank you for selecting me to be a part of such an astounding experience. I cannot believe how much I learned in one week, and it was so much fun. I am so glad that I attended the workshop because being in undergraduate school, I do not usually get a chance to do much hands-on work, but I mainly have to do a lot of difficult programming. At one time I was so frustrated with only having to program and not getting any hands-on experience that I almost considered changing my major. However, during the workshop I was so mesmerized by all of the hands-on experience, especially when we built the parallel computer. Your workshop helped me to remember why I wanted to be a computer science major in the first place. I feel so inspired now to go on and get my PhD in computer science. I hope that you will continue the workshop for many years so that other students will be so richly enhanced, just as the workshop enhanced me. I hope that when I obtain my PhD I will be able to return to the workshop no longer as a student but as a mentor for other students. I want to be able to help inspire others just as all of you in the workshop helped to inspire me."

Tanjala Purnell a participant at our
Computational Science Workshop for
Underrepresented Groups, January 5-11, 2003.

Multiscale Grid Simulation

- Seamless integration of:
  - > Molecular dynamics 10^8-10^9 atoms
  - > Density functional theory 10^3 atoms
  - > Finite element
- Implemented on a Grid of 4 Linux clusters in the US & Japan
- Studied stress corrosion of a crack in silicon by water



Grid Computing